Appendix D

Cultural Resources Coordination

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WF
PETE-E MN.
Copies to:
1) PM-C
2) Kevin C.

TEXAS HISTORICAL COMMISSION
real places telling real stories

November 12, 2009

William Fickel, Jr., Chief
Planning, Environmental, and Regulatory Division
Department of the Army
Fort Worth District, Corps of Engineers
P.O. Box 17300
Fort Worth, TX 76102-0300

Re: *Project review under Section 106 of the National Historic Preservation Act of 1966, as amended: City of Dallas Modifications to the Baker Pump Station of the Dallas Floodway, Dallas, Dallas County (USACE/106/201002304)*

Dear Mr. Fickel:

Thank you for your correspondence of describing the above referenced project. This letter serves as comment on the proposed undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission.

The review staff in the History Programs Division, led by Linda Henderson has completed its review of the project documentation received by our office on October 26, 2009. We concur with your determination that the New Baker Pump Station, built in 1975, is **not eligible** for listing in the National Register of Historic Places (NRHP). Furthermore, we concur with your determination that the East Levee is **eligible** for listing in the NRHP under Criterion A for its association with the planning and development of the City of Dallas. Finally, we also concur with your determination that the Old Baker Pump Station, built in 1930, is **eligible** for listing in the NRHP under Criterion A for its association with the planning and development of the City of Dallas, and under Criterion C for its design and construction.

The review staff in the Division of Architecture, led by Adam Alsobrook, has completed its review of the project documentation provided. We concur with your determination that the construction of a new sluiceway through the East Levee will have **no adverse effect** on this resource eligible for listing in the NRHP. Additionally, we concur with your determination that the construction of a new pump station and the decommissioning and mothballing of the Old Baker Pump Station will have **no adverse effect** on this resource eligible for listing in the NRHP.

Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Adam Alsobrook at 512/463-6183.**

Sincerely,

Adam Alsobrook, Project Reviewer
For: Mark Wolfe, State Historic Preservation Officer

cc: Michael Lowenberg, Chair, Dallas County Historical Commission
Jim Anderson, Historic Preservation Officer, City of Dallas
MW/aa

RECEIVED
18 Nov 2009

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

October 23, 2009

Planning, Environmental and Regulatory Division

RE: City of Dallas Modifications to Baker Pump Station of the Dallas Floodway, Dallas County, Texas

Texas Historical Commission
Mark S. Wolfe, Executive Director
1511 Colorado P.O. Box 12276
Austin, Texas 78711-2276

Dear Mr. Wolfe,

The City of Dallas seeks approval from the US Army Corps of Engineers (USACE) to make modifications to the Baker Pump Station in the Dallas Floodway, an undertaking that invokes Section 106 of the National Historic Preservation Act of 1966.

The US Army Corps of Engineers (USACE) has begun a comprehensive analysis and Environmental Impact Statement (EIS) regarding all proposed projects involving the USACE within and around the Dallas Floodway and its associated elements in Dallas County, Texas. However, this project is being pursued now due to health and human safety issues and the need to immediately provide flood protection around these two critical areas.

The Area of Potential Effect (APE) is limited to the immediate vicinity of the Baker Pump Station, which is isolated against the landward side of the East Dallas Floodway Levees. Within the APE are the Old Baker Pump Station (1930), the East Levee (1930/1955) and New Baker Pump Station (1975).

The proposed new pump station (reference enclosure) is located at the toe of the upland and includes a borrow pit area where levee fill was obtained and is adjacent to the sump pit area. Based on these factors of excavation and disturbance, the Corps finds that no archeological survey or testing is warranted and seeks your concurrence.

The USACE finds New Baker Pump Station (reference enclosure) , built in 1975, **not eligible** for the National Register due to its age of less than fifty years as it does not meet National Register Criterion G for exceptional significance.

The USACE finds the East Levee (reference enclosure) **eligible** for the National Register under Criterion A for its association with events under local planning and development of the city of Dallas. Originally constructed in 1928-32 and updated in 1954, the levee system is over fifty years of age, significantly impacted the growth and development of Dallas, and retains integrity.

A new sluiceway will be constructed through the East Levee but the levee will be repaired in kind. The Corps finds this a **no adverse effect**.

The USACE finds that the Old Baker Pump Station (reference enclosure), constructed in 1930, is individually **eligible** for the National Register of Historic Places under Criterion A for association with local planning and development and under Criterion C for Design and Construction values. The only loss of integrity is the bricking in of some windows in the 1970s, but the structure still retains the identity for with it is significant. It is being decommissioned with the new pump station being built in the vicinity, consistent with what has historically occurred to the pump stations of the Dallas Floodway as the system is upgraded. Baker will be retained by the City of Dallas in a mothballed condition. The USACE finds this a **no adverse effect** on the property.

We seek your concurrence on these findings. Please contact Joseph Scott Murphey at (817) 229-1956 or joseph.murphey@us.army.mil regarding any cultural resources questions regarding the project.

Sincerely,

Mark C. Harberg

For William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

PROPOSED MODIFICATIONS TO BAKER PUMP STATION OF THE DALLAS FLOODWAY
October 23, 2009

BAKER PUMP STATION

Baker Pump Station was constructed in 1930 as one of four pump stations of the original Dallas Floodway. The Floodway was constructed from 1928-1932 as part of a larger Plan of Reclamation by the City and County of Dallas Levee Improvement District and Dallas Levee Improvement District No. 5. Reference the attached research being conducted by the Corps on the Plan of Reclamation for the Comprehensive Analysis Environmental Impact Statement for placement of Baker within a larger historic context.

Significance

The significance of the Baker Pump Station is that is a true and representative example of a type, period and style of construction, i.e., an early 20th century pumping plant in support of a working engineering feature that significantly impacted the growth patterns of Dallas since its initial construction. Specifically, the distinctive characteristics of this type of construction are:

Sump Area to collect water to pump to the interior of the floodway.

Inlet Structure serves to direct flood water either to gravity flow during normal drainage or the pumps during floods. Concrete guide walls direct the water and trash gates keep out items that would clog the pumps.

Pump House contains four 52,000 gpm pump motors in a pump room over a Discharge Chamber.

Discharge Chamber located below the pump house is a dual purpose structure. It discharges the storm water to the interior of the floodway via culverts/sluiceway when the pumps are not in operation. When the water levels rise to a predetermined point, the gated openings close and the pumps begin operation.

Sluiceway. This concrete tube connects at the Pump House/ Discharge Chamber and carries the storm water through the levee to the outlet structure.

Outlet Structure. Consists of concrete head and wing walls to discharge the storm water inside the floodway. Automatic flap gates keep the water from back flowing to the landside of the levee.

Baker also represents the continuing evolution of the Floodway in response to its success as a reclamation project of moving the Trinity River for planned industrial development

under the Plan of Reclamation. The development of reclaimed lands, in turn, has led to increased drainage requirements and the need for increased capacity and additional pump stations.

Integrity

As evidenced by the 1929 construction drawings (attached), the structure retains integrity. The sump area, discharge chamber, culvert/sluiceway and outlet structure remain essentially unchanged. The pump house has suffered integrity loss by the elimination of the exterior windows, which were bricked in, probably during the 1954 USACE strengthening project. A new Baker Pump Station was built adjacent to Baker by the USACE in 1975. While integrity of design, materials and setting have been compromised, the identity for which the Baker Pump Station is significant is still readily apparent.

Eligibility

The Baker Pump Station is individually eligible under Criterion C for its design and construction values as an early 20th century pump station that is a true and representative example of a type and style of construction that retains integrity and the identity for which it is significant.

The Baker Pump Station is individually eligible under Criterion A for its association with events at a local level for the community planning and development of Dallas. Without effective interior drainage provided by the Baker Pump Station, development of the reclaimed lands for industrial development as specified in the Plan of Reclamation would not have been possible.

Under a separate undertaking, the Corps is currently examining its numerous actions within the floodway and is evaluating the Baker Pump Station as a potential contributing element of the Plan of Reclamation (1928-1959). A preliminary draft of the research is underway and is included for your information. Future research may reveal additional significance for this resource.

Proposed Undertaking

Due to life and safety issues due to increased flooding, the City of Dallas proposes to add an additional Baker Pump Station while decommissioning the original Baker Pump Station. The reoccurring issue with the floodway is as development increases, runoff increases and the interior drainage (getting water outside the levees into the floodway) demands increase. The increased demands leads to periodic updates to the system. Historically, the updating did not require the removal of the existing pump houses, but the addition of new facilities alongside the existing. The New Baker Station is consistent with this approach.

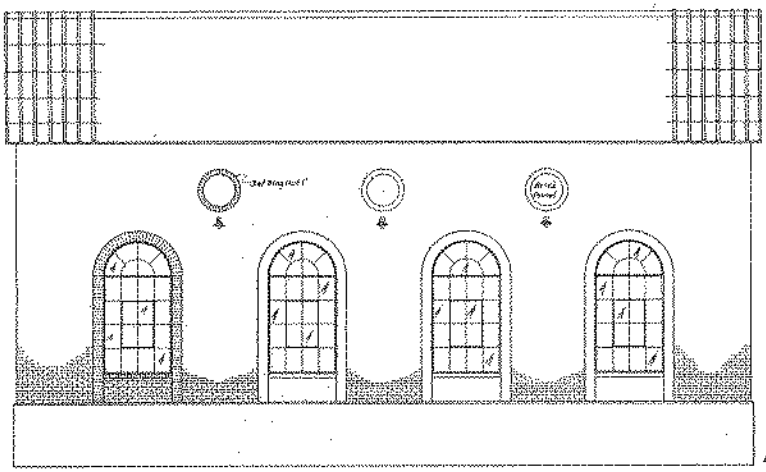
- A new pump station will be built nearby the existing Baker. This approach is consistent with previous updates of the system.
- Existing Baker will be decommissioned.
- The Pump Station, including Pumps, will be retained in a mothballed condition for potential future reuse.

Effects

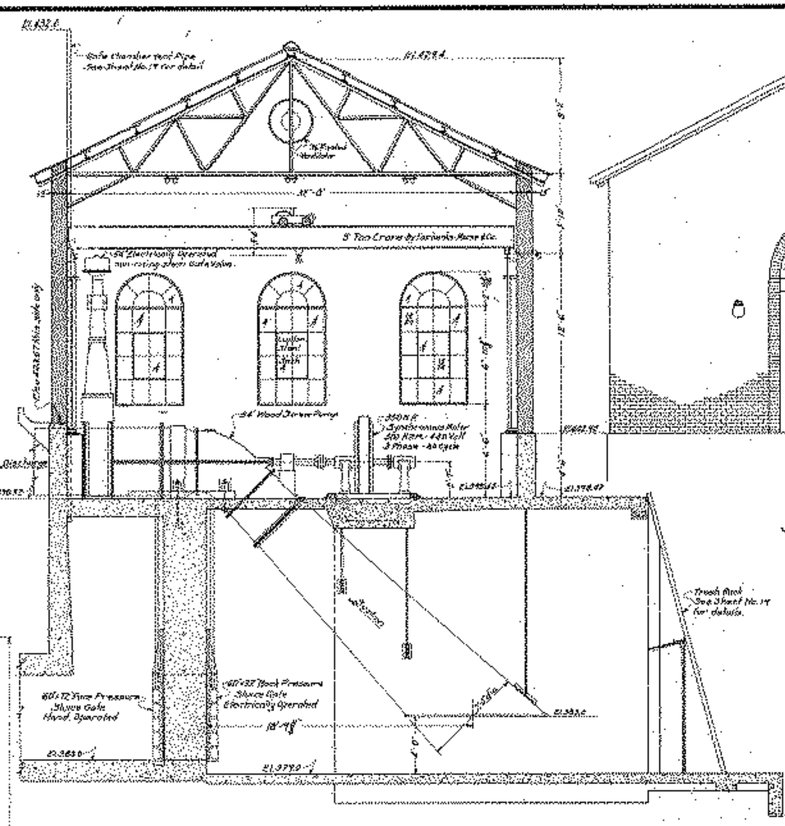
The decommissioning and mothballing of the Baker Pump Station and the construction of the new Pump Station is **not an adverse effect**.

OLD BAKER PUMP STATION

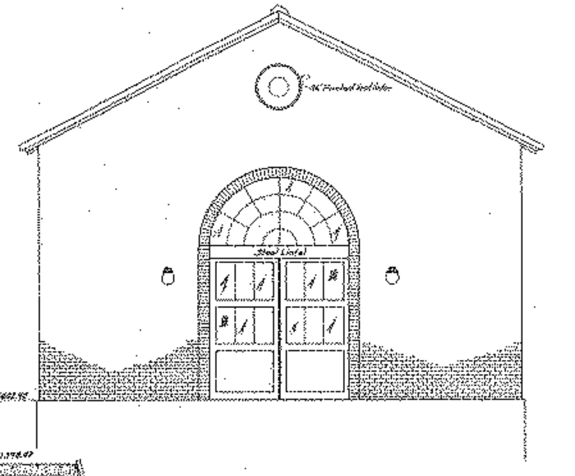
ORIGINAL
CONSTRUCTION
DRAWINGS



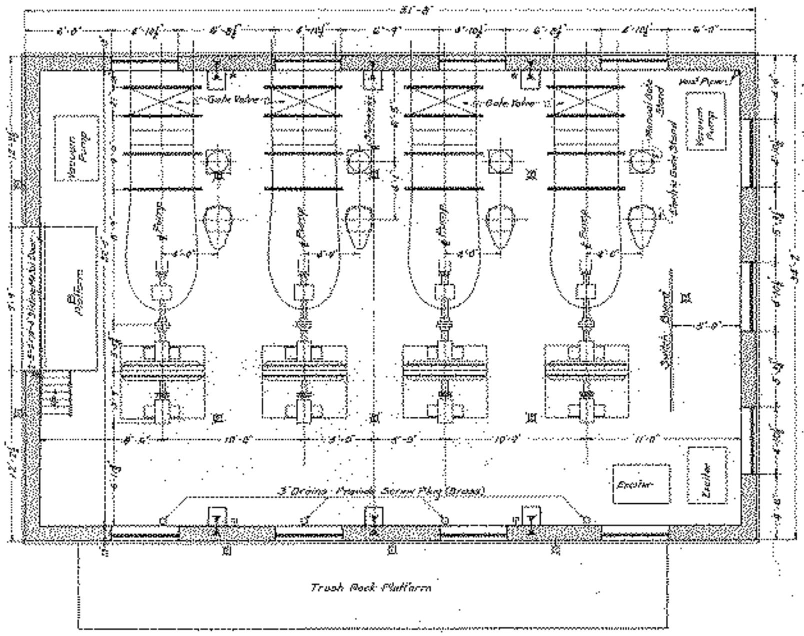
EAST ELEVATION



TYPICAL SECTION



SOUTH ELEVATION



FLOOR PLAN

NOTES:

Roof to be Federal Cement Tile Company's Interlocking Cement Tile or equal.

Details for Structural Steel to be approved by the Engineer.

Brick Facing to be Dark Red Mat Face-Brick, laid in Black 1:3 Portland Cement mortar with 3/8" raked joints. Backing up brick may be common brick. Brick shall be approved by the Engineer. Approved heavy wall ties shall be used in every course at frequent intervals.

Set brick out 2" around windows and door.

Provide substantial Yale lock or equal for door.

Wiring plans and lighting fixtures to be approved by the Engineer.

Windows to be Lupton steel windows with pivoted ventilator, or equal.

Doors to be Lupton seamless steel tube doors with wire glass or equal.

Building contract to include all work above Elevation 402.97, except crane and pumping equipment.

Brick wall on Levee side to be built after discharge pipes are in place.

Approved
MYERS, NOYES & FORREST
By [signature]

FOR MORGAN ENGINEERING CO.
Recommended: [signature]
Approved: [signature]

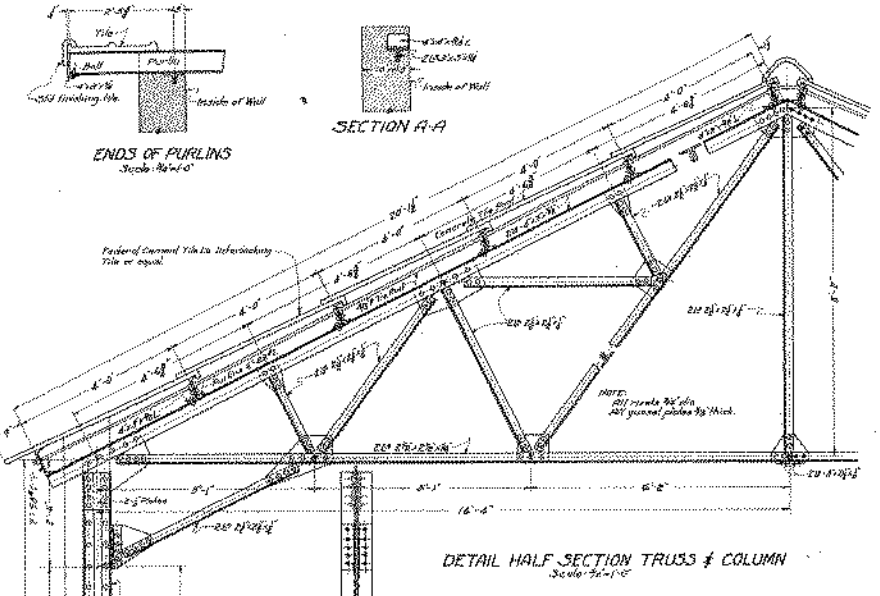
STATE OF TEXAS
CITY AND COUNTY
OF
DALLAS LEVEE IMPROVEMENT DISTRICT
AND
DALLAS COUNTY LEVEE IMPROVEMENT DISTRICT NO. 5

EAST LEVEE - SECTION NO. 2
HILLS LAKE DIVISION

SUPERSTRUCTURE - PUMPING PLANT B
SHEET NO. 5 OF 9 SHEETS

DISTRICT ENGINEER	CONSULTING ENGINEER
MYERS, NOYES & FORREST	MORGAN ENGINEERING CO.
DALLAS - TEXAS	MEMPHIS - TENN.

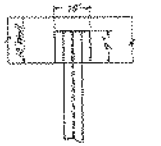
JULY 1, 1928
SCALE: 1/4" = 1'-0"



ENDS OF PURLINS
Scale: 3/4"=1'-0"

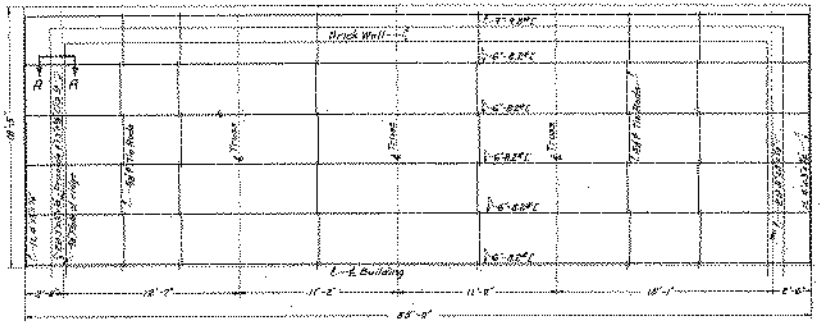
SECTION A-A

DETAIL HALF SECTION TRUSS & COLUMN
Scale: 1/2"=1'-0"

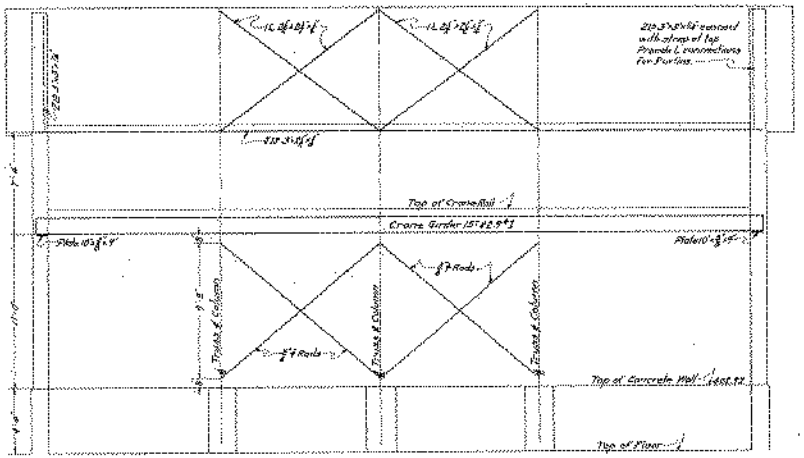


CRANE GIRDER BEARING PLATE
Scale: 3/4"=1'-0"

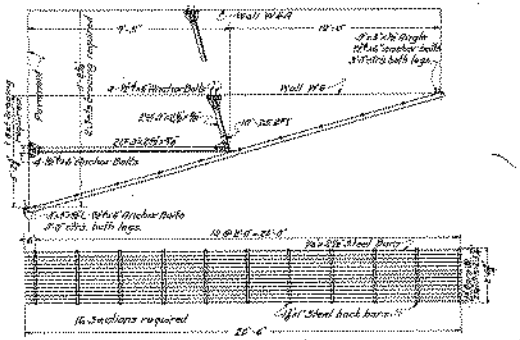
PURLIN SPLICE PLATE
For Purlins Only



HALF PLAN OF ROOF
Scale: 3/4"=1'-0"



ELEVATION ON ℄ BUILDING SHOWING BRACING
Scale: 1/8"=1'-0"



DETAIL TRASH RACK & BRACING
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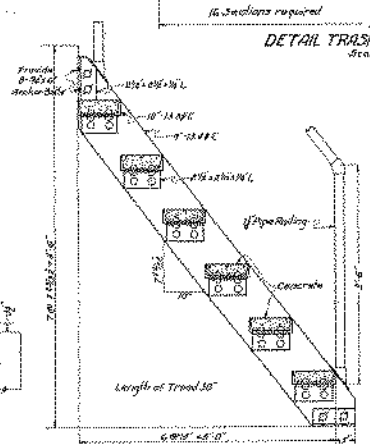
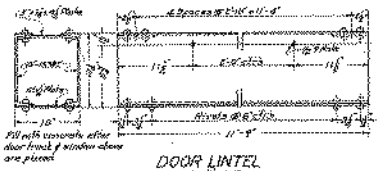
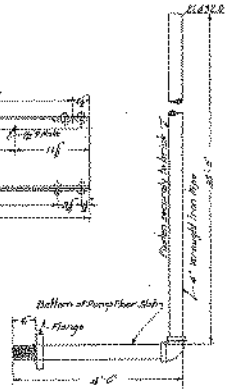


STEEL STAIR DETAIL
Scale: 1/2"=1'-0"
1-Required



DOOR LINTEL
Scale: 1/2"=1'-0"
1-Required



GATE CHAMBER VENT PIPE
See Sheet Nos. 16 & 18 for Location
Scale: 3/8"=1'-0"

Approved:
MYERS, NOYES & FORREST
By

FOR MORGAN ENGINEERING CO.
Recommended
Approved

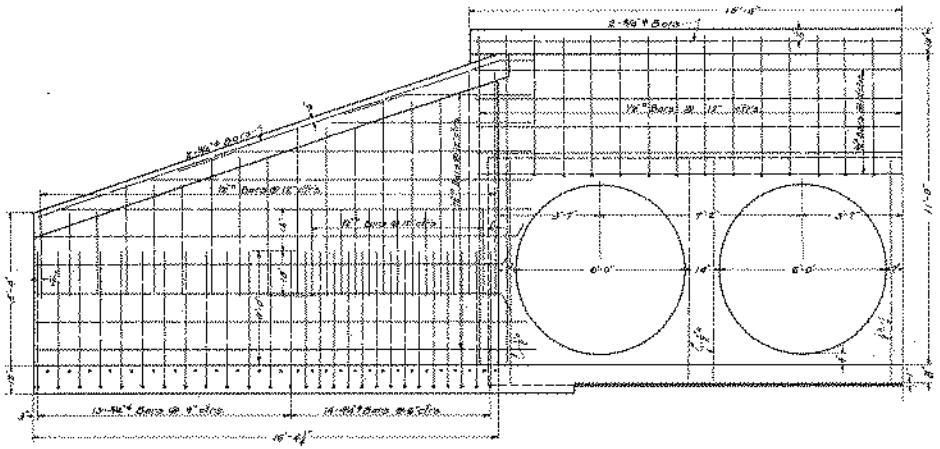
STATE OF TEXAS
CITY AND COUNTY
OF
DALLAS LEVEE IMPROVEMENT DISTRICT
AND
DALLAS COUNTY LEVEE IMPROVEMENT DISTRICT NO. 5

EAST LEVEE – SECTION NO. 2
TRINITY LAKE DIVISION
SHEET NO. 8 OF 9 SHEETS

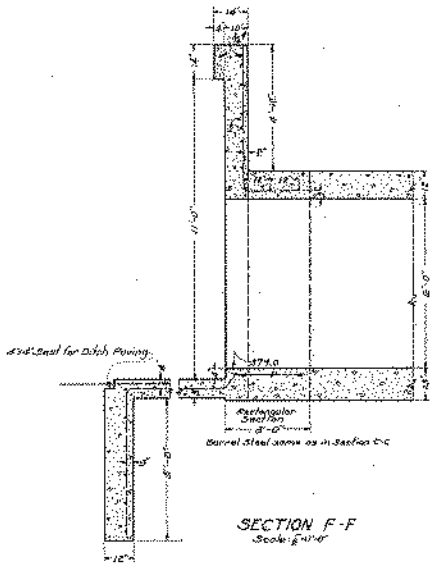
STEEL DETAILS – PUMPING PLANT B

DISTRICT ENGINEER	CONSULTING ENGINEER
MYERS, NOYES & FORREST	MORGAN ENGINEERING CO.
DALLAS – TEXAS	MEMPHIS – TENN.

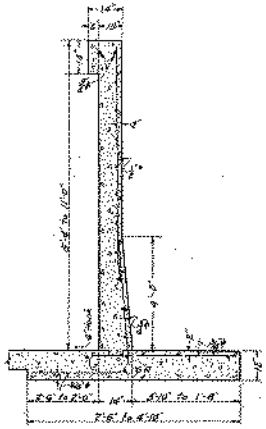
JULY 1, 1929
SCALE: AS SHOWN



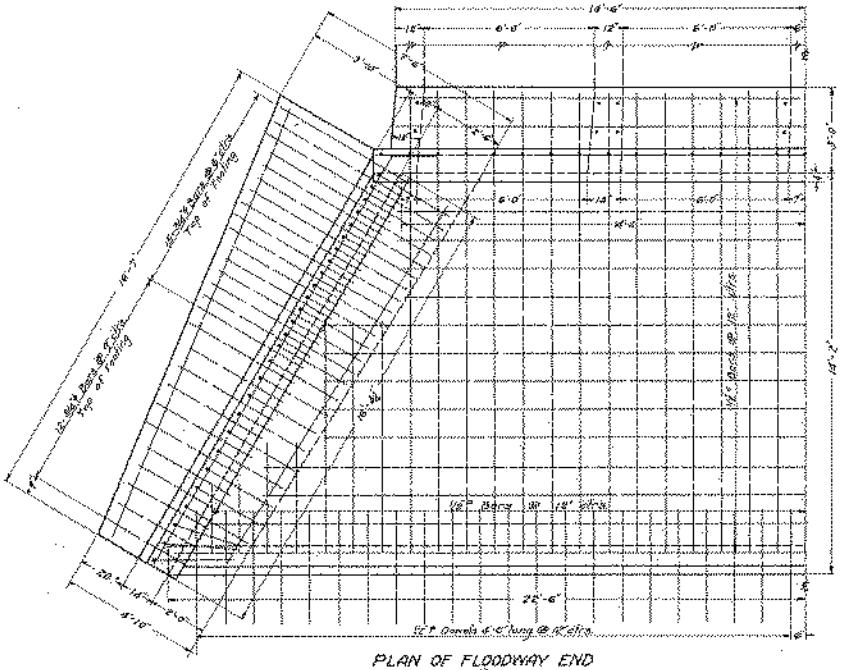
ELEVATION D-D
Scale: 1/8"=1'-0"



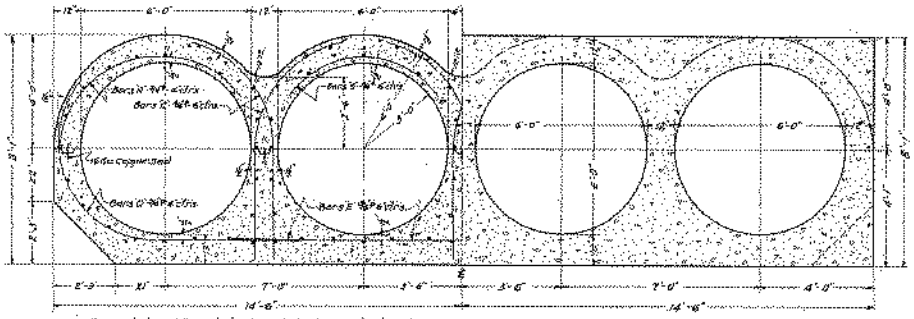
SECTION F-F
Scale: 1/4"=1'-0"



SECTION E-E
Scale: 1/4"=1'-0"



PLAN OF FLOODWAY END
Scale: 1/8"=1'-0"



See part plan of Barrel showing reinforcing, on sheet no. 14 Lines of 5/8" longitudinal bars in each barrel @ 12" centers as shown.

HALF SECTION C-C
Scale: 1/4"=1'-0"

Reinforcing same as shown in Half Section C-C

HALF SECTION G-G
Scale: 1/4"=1'-0"

Approved
MYERS, NOYES & FORREST
By

FOR MORGAN ENGINEERING CO.
Recommended
Chief Engineer
Approved
Vice President

STATE OF TEXAS
CITY AND COUNTY
OF
DALLAS LEVEE IMPROVEMENT DISTRICT
AND
DALLAS COUNTY LEVEE IMPROVEMENT DISTRICT NO. 5

EAST LEVEE - SECTION NO. 2

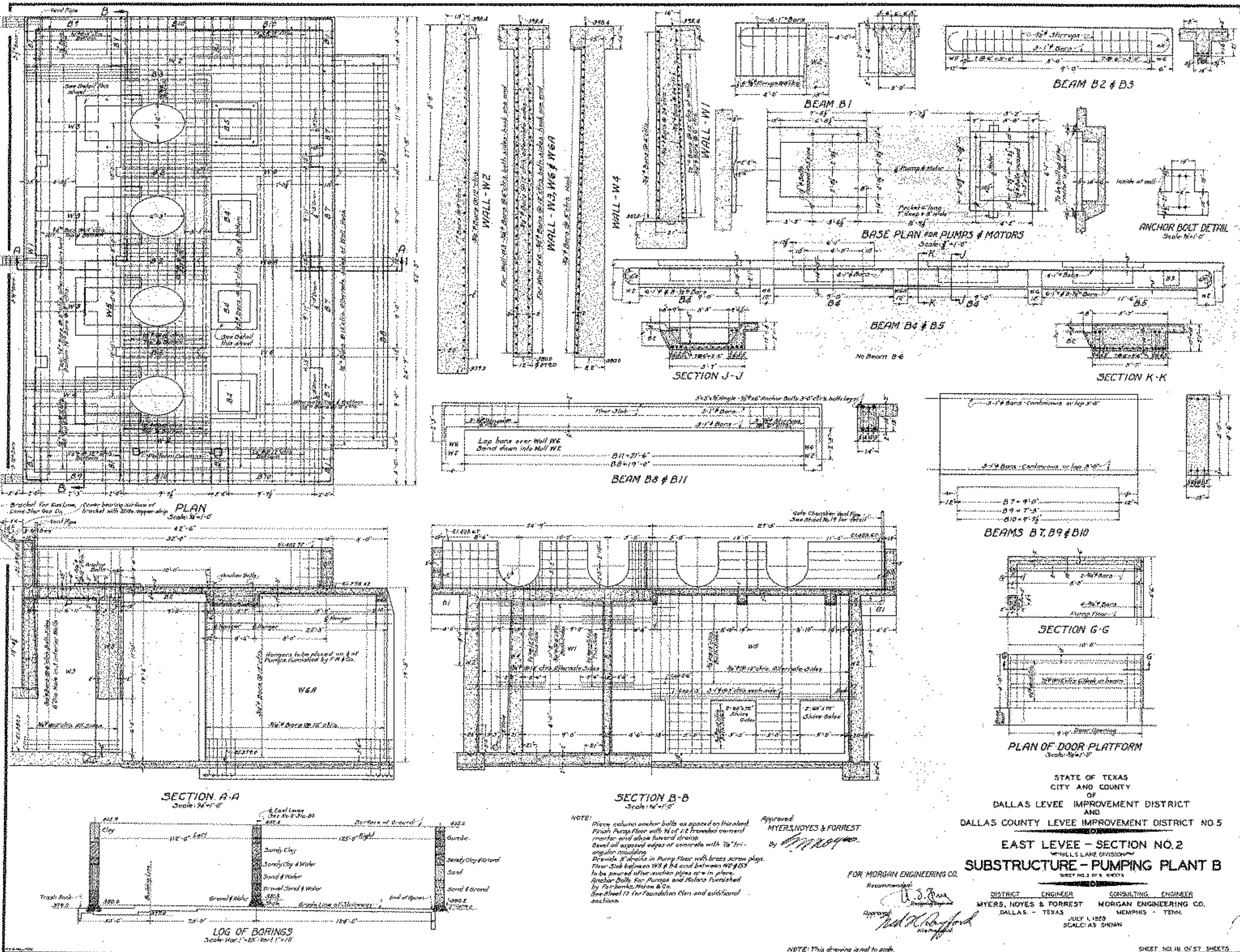
WILLS LAKE DIVISION

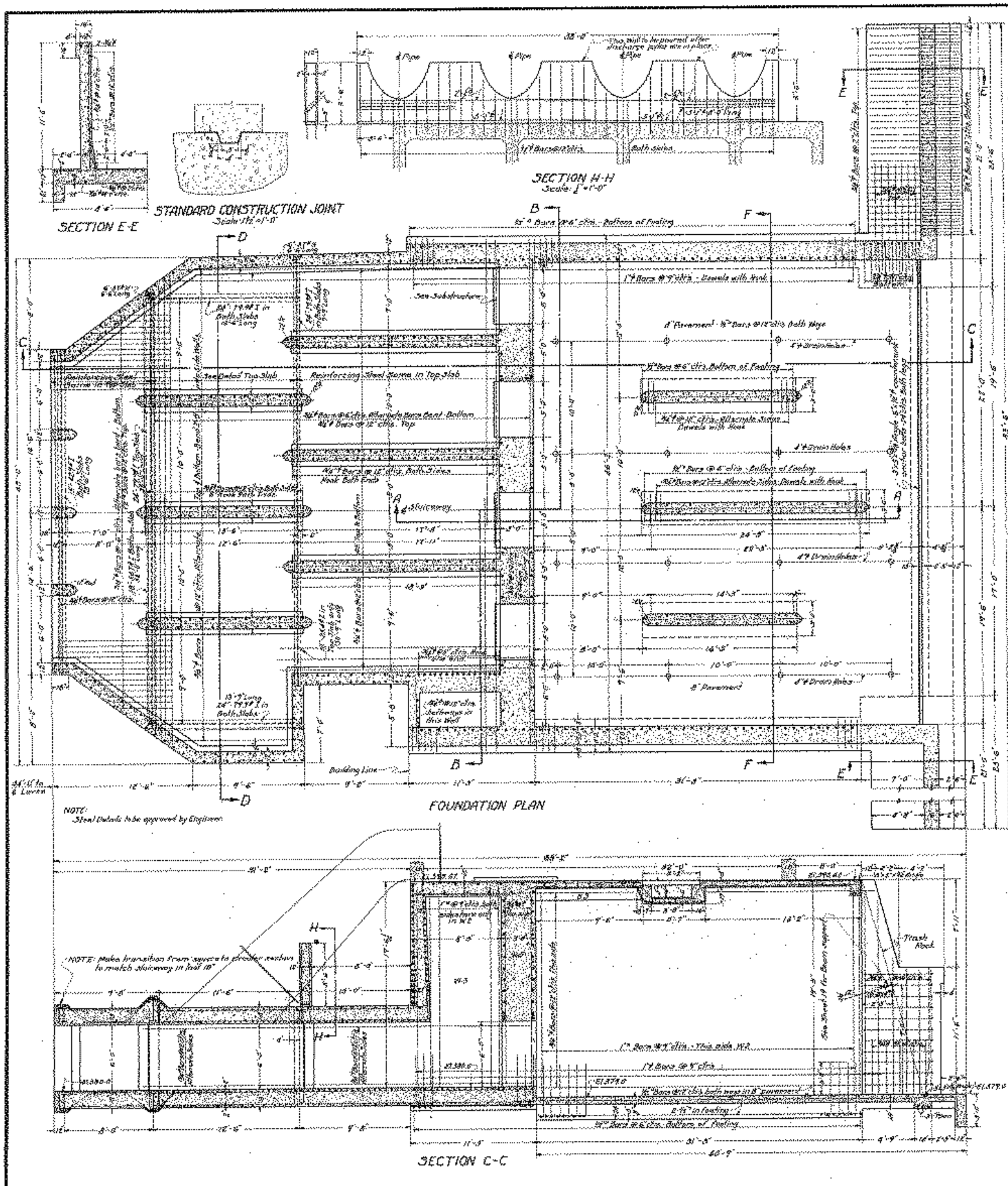
DETAILS OF SLUICEWAY - PUMP PLANT B

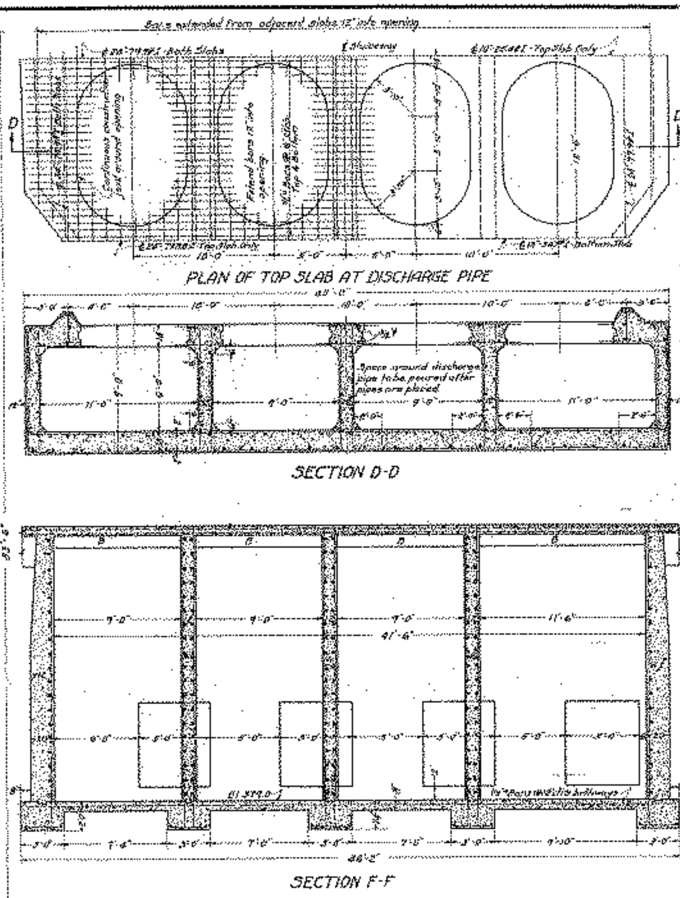
SHEET NO. 13 OF 15 SHEETS

DISTRICT ENGINEER	CONSULTING ENGINEER
MYERS, NOYES & FORREST	MORGAN ENGINEERING CO.
DALLAS - TEXAS	MEMPHIS - TENN.

JULY 2, 1952
SCALE: AS SHOWN


WALL - W2
WALL - W3, W6 & W6A
WALL - W4
WALL - W1
BEAM B1
BEAM B2 & B3
BASE PLAN FOR PUMPS & MOTORS
ANCHOR BOLT DETAIL
BEAM B4 & B5
No Beam B6
SECTION J-J
SECTION K-K
BEAM B8 & B11
Lap bars over Wall W6
Bend down into Wall W2
BEAMS B7, B9 & B10
PLAN
SECTION A-A
SECTION B-B
SECTION G-G
PLAN OF DOOR PLATFORM
LOG OF BORINGS
NOTE:
Place column anchor bolts as spaced on this sheet.
Finish Pump Floor with ¾ of 1:1 troweled cement mortar and slope toward drains.
Bevel all exposed edges of concrete with ¾" triangular moulding.
Provide 3" drains in Pump Floor with brass screw plugs.
Floor Slab between W3 & B4 and between W2 & B3 to be poured after suction pipes are in place.
Anchor Bolts for Pumps and Motors furnished by Fairbanks, Morse & Co.
See Sheet 17 for Foundation Plan and additional sections.
Approved:
MYERS, NOYES & FORREST
FOR MORGAN ENGINEERING CO.
Recommended:
Approved:
STATE OF TEXAS
CITY AND COUNTY
OF
DALLAS LEVEE IMPROVEMENT DISTRICT
AND
DALLAS COUNTY LEVEE IMPROVEMENT DISTRICT NO. 5
EAST LEVEE - SECTION NO. 2
SUBSTRUCTURE - PUMPING PLANT B
DISTRICT ENGINEER
MYERS, NOYES & FORREST
DALLAS. - TEXAS
CONSULTING ENGINEER
MORGAN ENGINEERING CO.
MEMPHIS - TENN.
JULY 1, 1929
SCALE: AS SHOWN
NOTE: This drawing is not to scale.
SHEET NO. 18 OF 57 SHEETS





NOTE:
This design made for slab foundation.
Bevel all exposed edges of concrete with ¾" triangular moulding.
Provide bolted connections for steel beams to columns and beams to beams.
Steel details to be approved by Engineer.
Provide 4" drain holes at 10'-0" ctrs. in wing walls.
See Sheet 16 for additional Sections and Details.

Approved:
MYERS, NOYES & FORREST
By [signature]

FOR MORGAN ENGINEERING CO.
Recommended: [signature]
Approved: [signature]

STATE OF TEXAS
CITY AND COUNTY
OF
DALLAS LEVEE IMPROVEMENT DISTRICT
AND
DALLAS COUNTY LEVEE IMPROVEMENT DISTRICT NO. 5

EAST LEVEE – SECTION NO. 2
HILLS LAKE DIVISION

FOUNDATION – PUMPING PLANT B

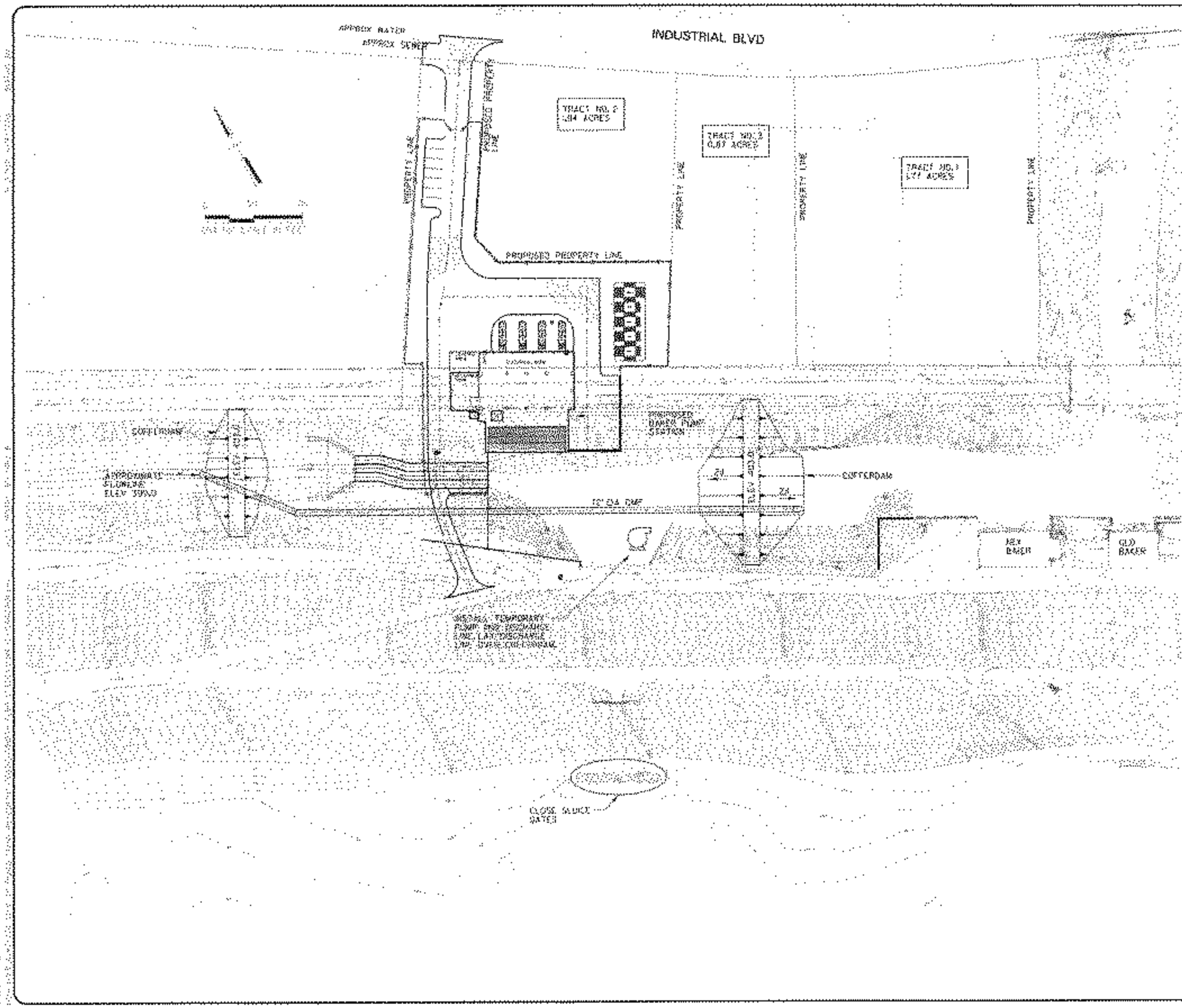
DISTRICT ENGINEER	CONSULTING ENGINEER
MYERS, NOYES & FORREST	MORGAN ENGINEERING CO.
DALLAS – TEXAS	MEMPHIS – TENN.

JULY 1, 1929
SCALE: ⅛" = 1'-0"

SHEET NO. 17 OF 53 SHEETS

2009 BAKER PUMP STATION

SELECT CONSTRUCTION DRAWINGS



BAKER STORMWATER PUMP STATION
CONCEPTUAL CONSTRUCTION SEQUENCE

1. CONTRACTOR MOBILIZE ON SITE
2. SET PERIMETER CONSTRUCTION SECURITY FENCE
3. SET UP TRAILERS, TEMPORARY UTILITIES, ETC.
4. CLEAR AND GRUB LAY DOWN/STORAGE AREAS
5. CONSTRUCT TEMPORARY 72-INCH BY-PASS DRAIN
6. CONSTRUCT TEMPORARY CONSTRUCTION DYKES
7. CLOSE EXISTING GRAVITY SLUICE GATES
8. ESTABLISH ALL CONSTRUCTION ACCESS ROADS
9. DEWATER CONSTRUCTION SITE - MAINTAIN DRY
10. CONSTRUCT TEMPORARY SOIL RETENTION WALLS [illegible]
11. EXCAVATION IN PHASES
    - 5 BOX CULVERTS
    - SUMP AT PS INTAKE
    - PUMP STATION
    - GRAVITY [illegible]
    - DISCHARGE BOX
12. CONSTRUCT 5 BOX CULVERTS AND ASSOCIATED WING WALLS
13. REPLACE DISCHARGE BOX FROM GRAVITY SLUICES IN CROSSING OVER BOX CULVERTS
14. PLACE PS MAT SLAB
15. CONSTRUCT PS FOUNDATION SLAB
16. CONSTRUCT PS WALLS TO EL [illegible] IN PREPARATION FOR [illegible]
17. CONSTRUCT PS INTAKE BAY WALLS TO EL [illegible]
18. CONSTRUCT HEADWALL RETAINING WALLS
19. [illegible] MASS [illegible] PLACEMENT TO EL 393
20. CONSTRUCT [illegible] PUMP DISCHARGE PIPING UNDER ELECTRICAL ROOM
21. INSTALL DRILLED PIERS FOR ELECTRICAL ROOM FOUNDATION
22. CONSTRUCT ELECTRICAL ROOM FOUNDATION SLAB
23. FINISH DISCHARGE BOX CONSTRUCTION
24. CONSTRUCT PS FLOOR AT EL [illegible]
25. REMOVE TEMPORARY SOIL RETENTION WALLS
26. BACKFILL PS
27. INSTALL MECHANICALLY CLEANED SCREENS
28. COMPLETE PS SUPERSTRUCTURE FRAMING
29. INSTALL BRIDGE CRANE
30. COMPLETE PS ARCHITECTURAL ENCLOSURE
31. INSTALL PS ELECTRICAL/[illegible] SYSTEMS
32. YARD PIPING AND ROUGH SITE GRADING
33. REMOVE TEMPORARY BY-PASS DRAIN
34. DEMOLITION OF EXISTING SUMP CHANNEL LINER IN AREA PROTECTED BY DIKES
35. CONSTRUCT NEW SUMP CHANNEL LINER IN AREA PROTECTED BY DIKES
36. SITE PAVING AND PERIMETER SECURITY FENCE
37. REMOVE TEMPORARY CONSTRUCTION DYKES
38. CONSTRUCT RETAINING WALL IN VICINITY OF NEW BAKER PS
39. FINAL SUMP GRADING/REMAINING CHANNEL LINER, ACCESS ROAD, ETC
40. FINAL SITE RESTORATION AND LANDSCAPING

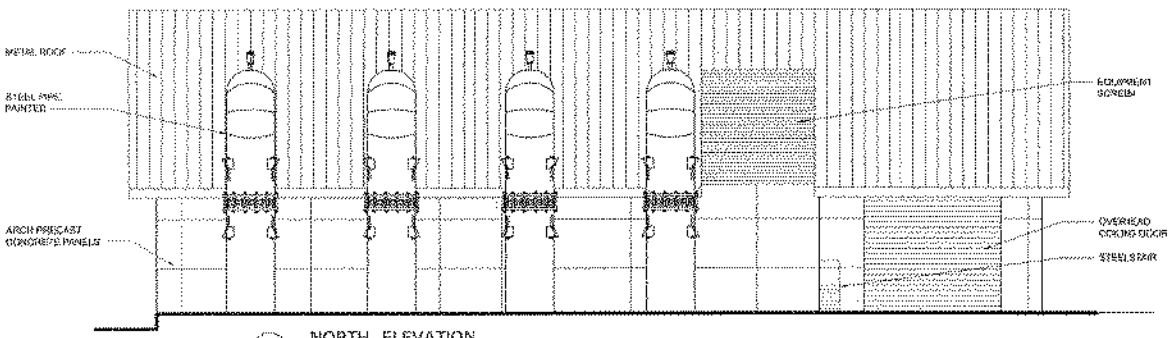
Carter::Burgess

CITY OF DALLAS DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
BAKER STORMWATER PUMPING STATION

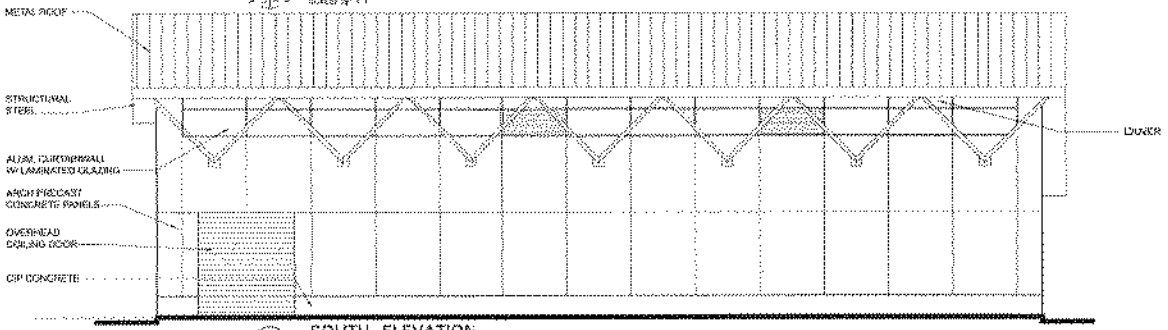
TEMPORARY CONSTRUCTION & CONCEPTUAL CONSTRUCTION SEQUENCE

CONTRACT NO. 09-XXXX

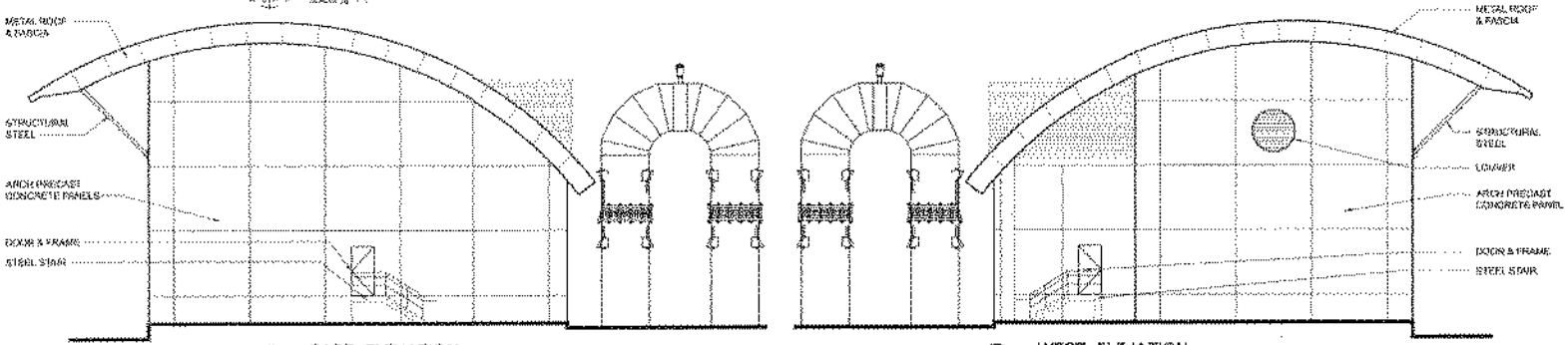
C-8



NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION

WEST ELEVATION

CONTRACT NO. 09-XXXX

Carter Burgess

CITY OF DALLAS DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
BAKER STORMWATER PUMPING STATION

EXTERIOR ELEVATIONS

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